PRIMARY CARCINOMA OF THE OMENTUM WITH PERITONITIS CARCINOMATOSA.[1]

By Arnold Sturmdorf, M.D.,
OF NEW YORK.

While it is not unusual to find the omentum involved in malignant disease, either by contiguity or metastasis from adjacent or remote organs, it is rare to find it the site of a primary malignant growth.

Such primary peritoneal cancers have been the subject of much investigation and controversy and there still exists much confusion in terminology as well as in fundamental conceptions as to histogenesis and development.

For obvious reasons the older publications on this subject cannot be utilized in the elucidation of such obscurities from a modern point of view.

Thus, it was formerly accepted that the histological characteristics of primary peritoneal cancers were typically *carcinomatous*, while within the last decades this view has undergone considerable modification.

It became apparent that the primary development of an epithelial growth, in parts in which epithelium does not normally exist as such, is incompatible with advanced conceptions of histogenic and biologic processes.

Consequently the term *carcinoma* applied to such primary peritoneal neoplasms must prove a misnomer and, as a result, either the *primary* nature or the *carcinomatous* type of the cases reported was questioned, so that in 1872 Waldeyer wrote:

"Whereas, before the appearance of Thiersch's work on this subject, cases of primary carcinoma of the peritoneum were described by a number of observers, no reports of such cases have appeared within the last six years."

The reported cases alluded to in this quotation were discarded by Orth as unauthentic and lacking in definite characterizing detail.

Notwithstanding these theoretical contentions, we find, three years later (in 1875), the report of a case of primary carcinoma of the peritoneum published by Quincke; while again, in 1890, the Committee on Morbid Growths of the Pathological Society of London examined and described as carcinoma, a primary tumor of the omentum with numerous metastatic growths in the abdominal cavity shown by West.

Whether these two authoritative cases really demonstrate the heterologous development of primary carcinoma, must remain an open question until definite knowledge is gained concerning the characterizing elements of the group of tumors embraced by the generic term *endothelioma.*

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[1] Presented before the Surgical Section of the New York Academy of Medicine November 4, 1904, with presentation of specimen and microscopic demonstration.

These latter growths, said to arise from the endothelial layer of lymph- and bloodvessels, may so closely simulate carcinoma in microscopic appearance that their endothelial type can be established only by serial sections, locating their origin in or about the lymphatics and bloodvessels.

The exact histological position, however, of such endotheliomata is still in dispute.

They have been regarded as infectious, and Leyden succeeded in isolating a peculiar form of rhizopod from the ascitic fluid of a case of primary malignant peritonitis.

This finding has been corroborated in a number of cases by Nothnagel, Lauenstein, and Schaudinn.

The last proposed the term Leydenia gemmipara for these organisms, although their etiological relationship to peritoneal cancer is not at the present time generally accepted.

Delafield and Prudden describe endothelioma as "a group of tumors which on the one hand are closely related to the sarcomata in genesis and in some cases in appearance, while on the other hand some of them so closely resemble some forms of carcinoma as to be difficult of distinction from them."

This bizarre nature of the histological criteria in these tumors explains the contradiction as to prevalence and frequency found among authoritative reports.

Thus, Glockner, who analyzed the literature on the subject to 1895, states that "primary peritoneal endothelioma is by no means rare," while Nothnagel mentions but two personally observed cases in which the peritoneum was primarily and exclusively involved.

It is possible that the direction of modern etiological research, in relation to malignant growths in general, may ultimately point the way to an elucidation of some of the obscurities thus briefly outlined; in the present instance, however, it is only possible to adhere to the prevalent caption, carcinoma, leaving it to more advanced doctrines to relegate the cases into their proper category.

The history of our case is as follows:

Mrs. E. C., aged sixty-two years, married thirty years, widow eight years; father died of Bright's disease; mother of pulmonary tuberculosis. Patient was normally delivered of three children, the last twenty-six years ago, all of whom died of tuberculous disease. Menstruation began at fourteen and ceased permanently twenty-five years ago. No menstrual or climacteric abnormalities.

Barring a traumatism which resulted in the acute destruction of her left breast twenty-six years ago, her previous history presents no data bearing on her present condition.

For four months an increasing tenderness, with recurring attacks of pain, accompanied the gradual development of a hard mass, occupying the middle of the right half of the abdomen. The mass grew rapidly, while pain, abdominal distention, dyspnœa, with loss of flesh and strength, developed to a distressing degree. When first examined, in August of this year, the patient presented the following status: A pale, yet fairly nourished woman of medium stature, with normal pulse and temperature; slight dyspnœa. The heart presents evidences of a compensated mitral insufficiency. Lungs normal; abdomen symmetrically enlarged and very tense.

General abdominal tenderness, most marked in the right half, which contains the major part of a hard, quadrilateral mass, the upper border of which can be defined as a nodular ridge extending across the epigastrium from points continuous with the mammillary lines. The lateral borders of this mass converge (the left more than the right) toward its lower pole, which seems to project free into the pelvic cavity. The mass is very hard and presents a rough, irregularly nodular surface.

It is uninfluenced by respiration, is slightly mobile from side to side, and to a less degree in an upward direction. Its upper border is fixed, while its lower free pole could be subjected to ballottement in the excessive amount of ascitic accumulation. Percussion and colonic inflation indicated the presence of intestine between the liver and the upper border of the growth. Spleen not demonstrable. Genito-urinary organs intact and free from involvement. Marked œdema of ankles. Urine normal. Blood shows 60 per cent. hæmoglobin, no corpuscular changes—quantitative or qualitative.

On September 14th, through a four-inch supraumbilical incision, which gave vent to a large quantity of serosanguineous fluid, a mass of infiltrated omentum was removed. Its removal offered no unusual difficulties. The parietal peritoneum was found studded with countless papillary excrescences, presenting hard, flattened nodules, varying in size from miliary dots to a split pea, very hard, yellowish-white in color, and in many instances showing a tendency to umbilication. Each papilla presented a small area of inflammatory margin around its base. Aside of this finding, the most painstaking search throughout the abdominal contents failed to reveal the presence of similar neoplastic formation as a possible primary or secondary focus of the disease.

Although the cancerous nature of the growth was evident at the time of its extirpation, yet the clinical resemblance to some forms of peritoneal tuberculosis, more especially in view of the tuberculous family history, made a positive differentiation impossible until Dr. Schnaper kindly furnished the microscopic evidence of its carcinomatous character, which I beg to submit for your inspection. He also furnished the following report:

"The tumor upon microscopic examination presents the characteristic picture of an alveolar carcinoma. The epithelial cells are varied in shapes. Nucleus stains well. The epithelial masses are varied in size and shape; the cells fill the alveoli and are in close relationship to one another. The Van Gieson stain failed to reveal any stroma between the cells. The stroma is made up of firm connective tissue and shows infiltration of fat, and in places there is a round-cell infiltration."

Whether true carcinoma or endothelioma, and if carcinoma, whether primary or secondary, the primary focus having thus far eluded our search, will probably remain an open question for the present. The patient made an uninterrupted recovery from the operation. It is now seven weeks since, and she presents no functional disturbance that might point to the possible involvement of a particular organ and is apparently enjoying the results of a symptomatic cure.

While the case thus detailed presents many points for profitable discussion, both practical and theoretical, there is but one phase of which I would speak in closing, and that is the complicating carcinomatous peritonitis mentioned in the title.

The multiple papillary excrescences found studding the parietal peritoneum cannot be interpreted in this case as merely passive metastatic deposits, but represent a type of malignant subacute efflorescence, clinically similar to that which is recognized as occurring in tuberculous and other infectious processes, and productive of profuse serous exudation. As a matter of fact, such forms of primary acute miliary carcinosis of the peritoneum are described by Bauer in *Ziemssen's Cyclopædia* and by Nothnagel, the miliary excrescences resembling those described above in every detail. In no other way can we explain such enormous ascitic accumulation in so short a period in the absence of circulatory obstruction.

A complete bibliography will be found in *Ziemssen's Cyclopædia*, vol. viii. p. 337; Nothnagel, *Specielle Pathologie und Therapie*, article "Geschwülste d. Peritoneum."

HYPERTROPHY AND STENOSIS OF THE PYLORUS IN INFANTS.*

By F. L. Wachenheim, M.D.,
of New York.

The following addition to the sixty-odd hitherto recorded cases of hypertrophy and stenosis of the pylorus in infants has come under my observation:

Thomas M., aged five weeks, was seen by me for the first time on September 29, 1904. His mother stated that uncontrollable

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[*] Read before the Pediatric Section, New York Academy of Medicine, December 8, 1904.